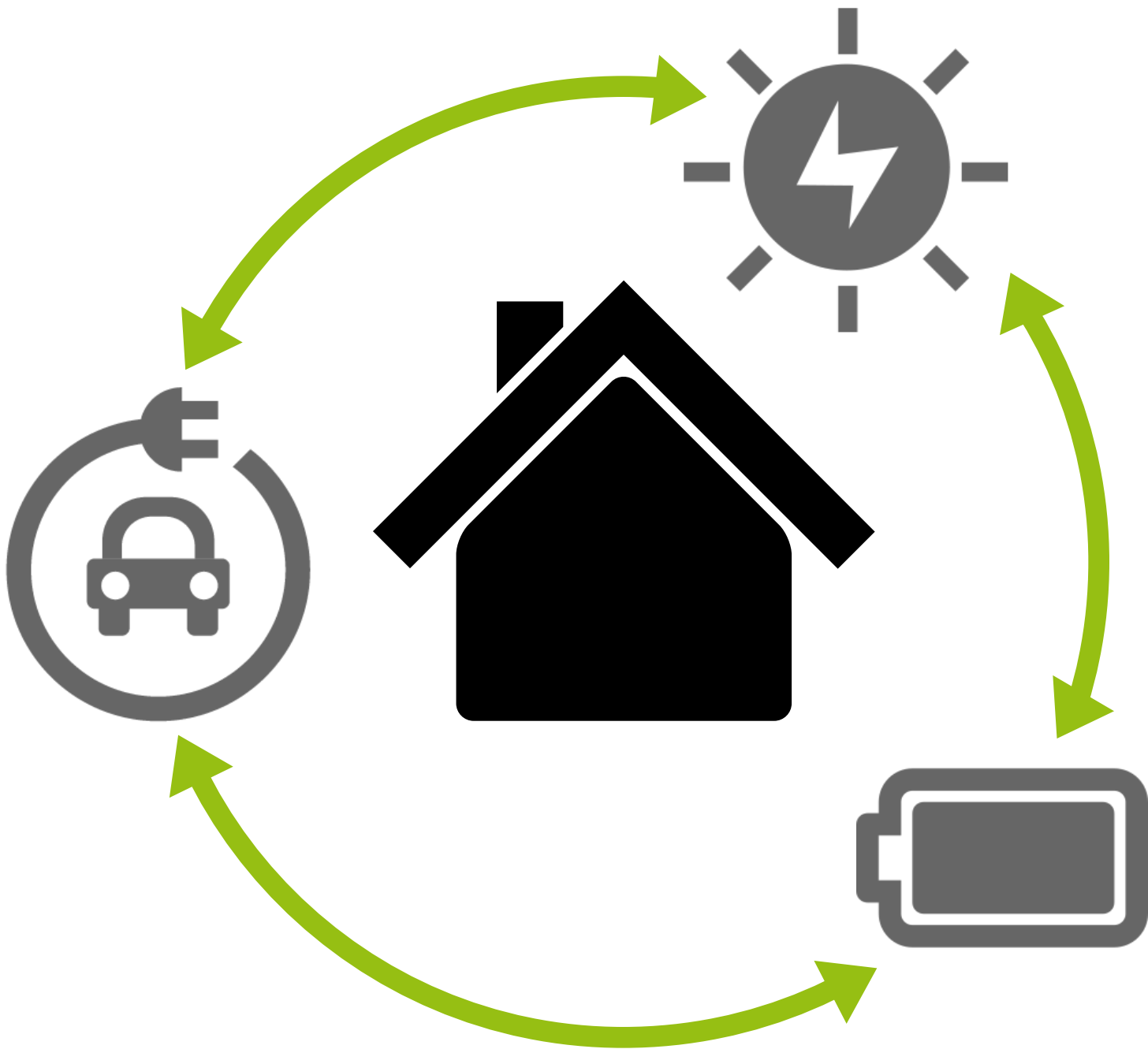




# Empowering People to Make Smart Energy Decisions

April 2015

Josh Gleason  
josh@bidgely.com



# BIDGELY VISION: Connected Home Intelligence

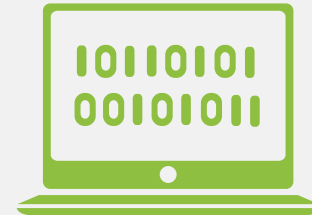




Total: 34

US (Sunnyvale): 20

India (Bangalore): 14



6 Data Scientists

4 Ph.Ds. from Stanford,  
Berkeley, UIUC and UNC

- Data Analytics | Machine Learning
- Appliance-Level Energy Consumption
- HomeBeat Platform

Access

Knowledge

Engagement



# ACCESS: HomeBeat Energy Monitor

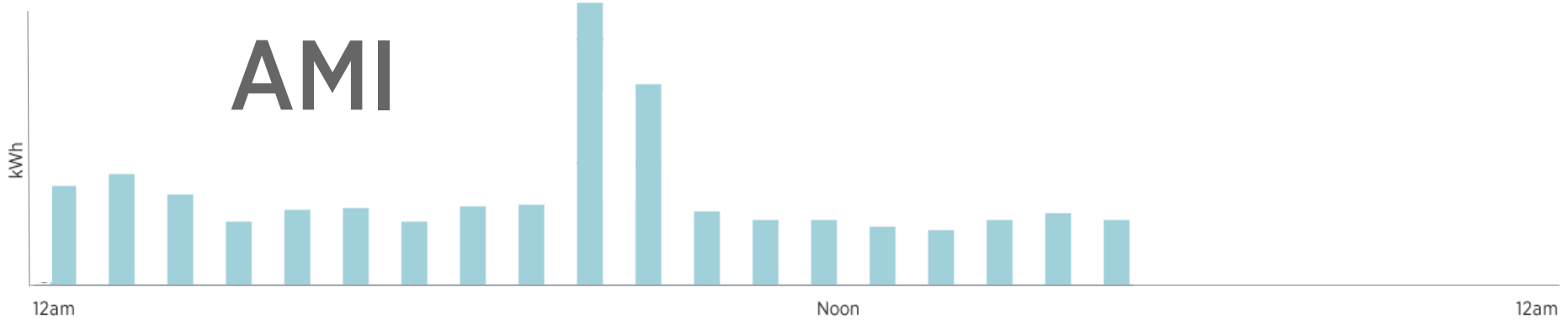


Disruptive Pricing

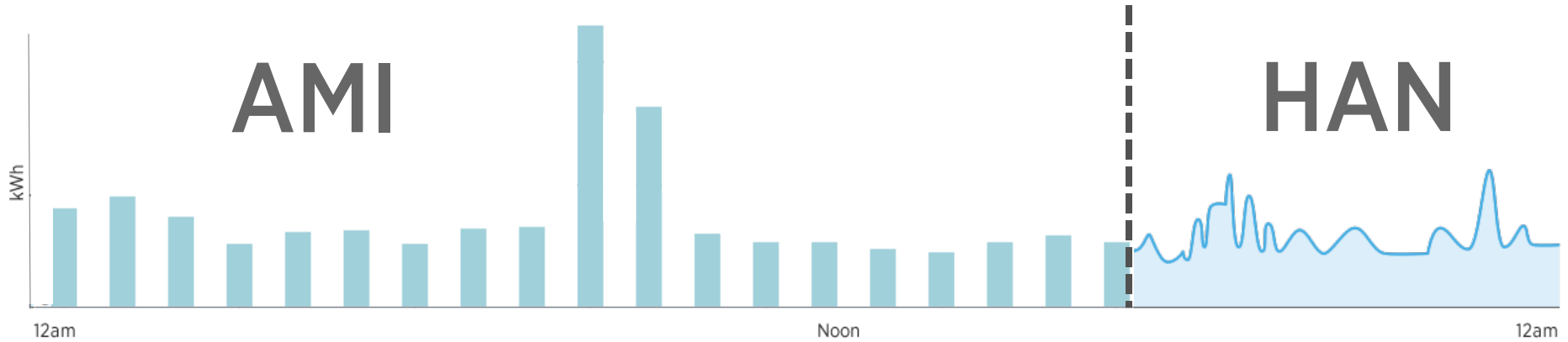
Leverages Existing Infrastructure

Real-Time Alerts & Notifications

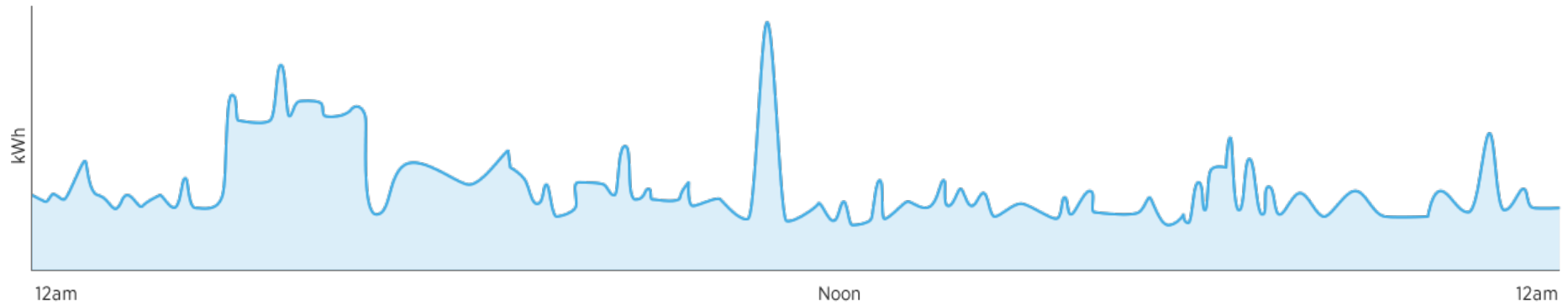
# ACCESS: HomeBeat Energy Monitor



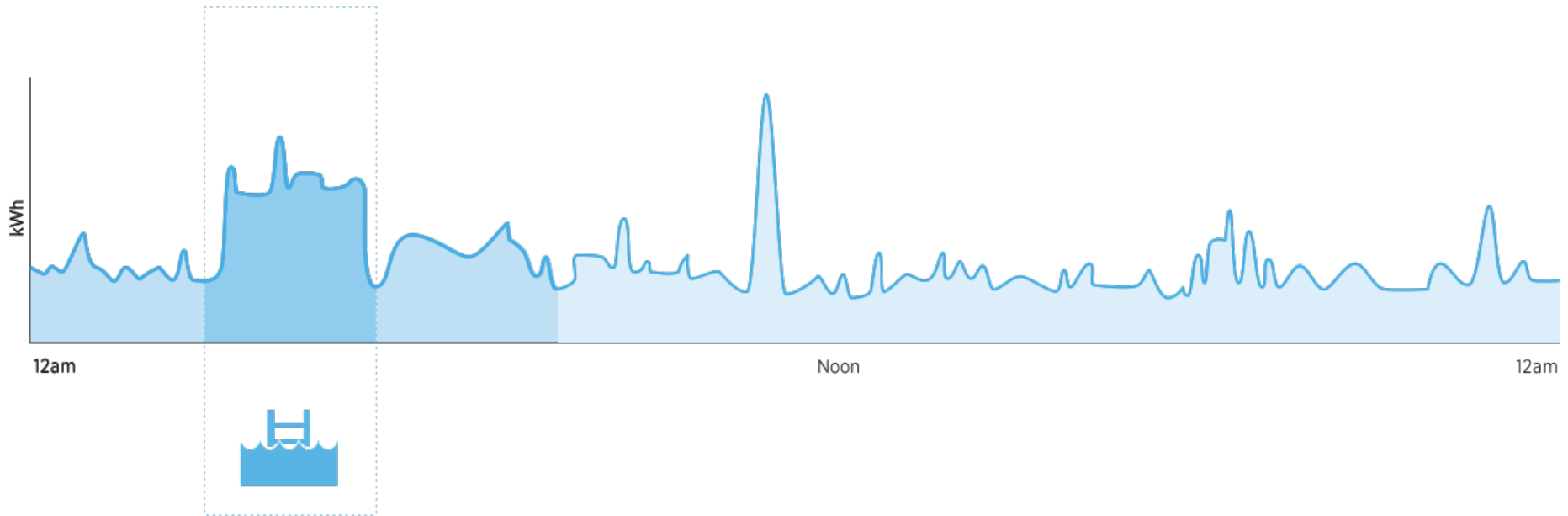
# ACCESS: HomeBeat Energy Monitor



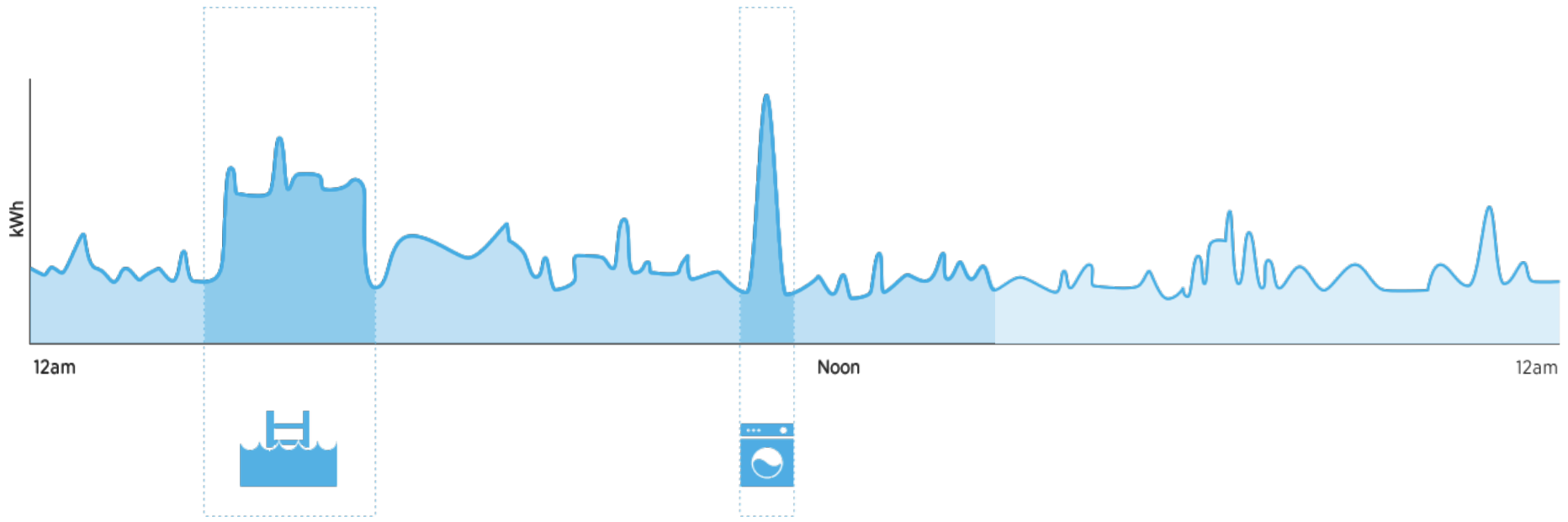
# ENERGY DISAGGREGATION



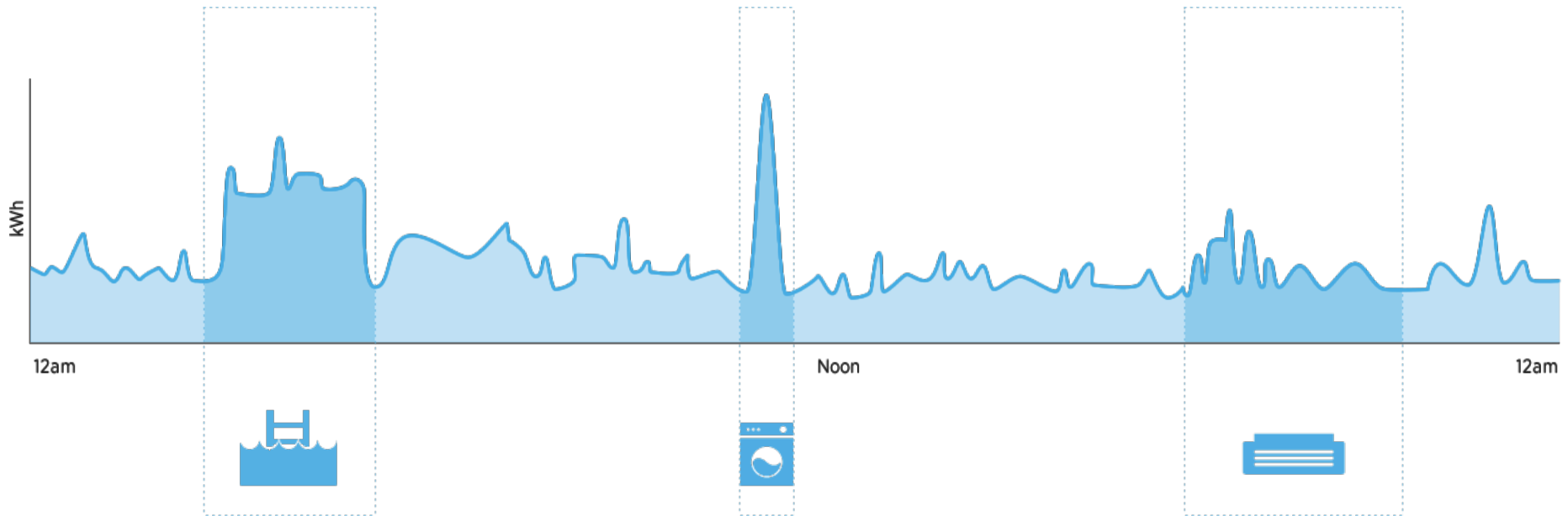
# ENERGY DISAGGREGATION



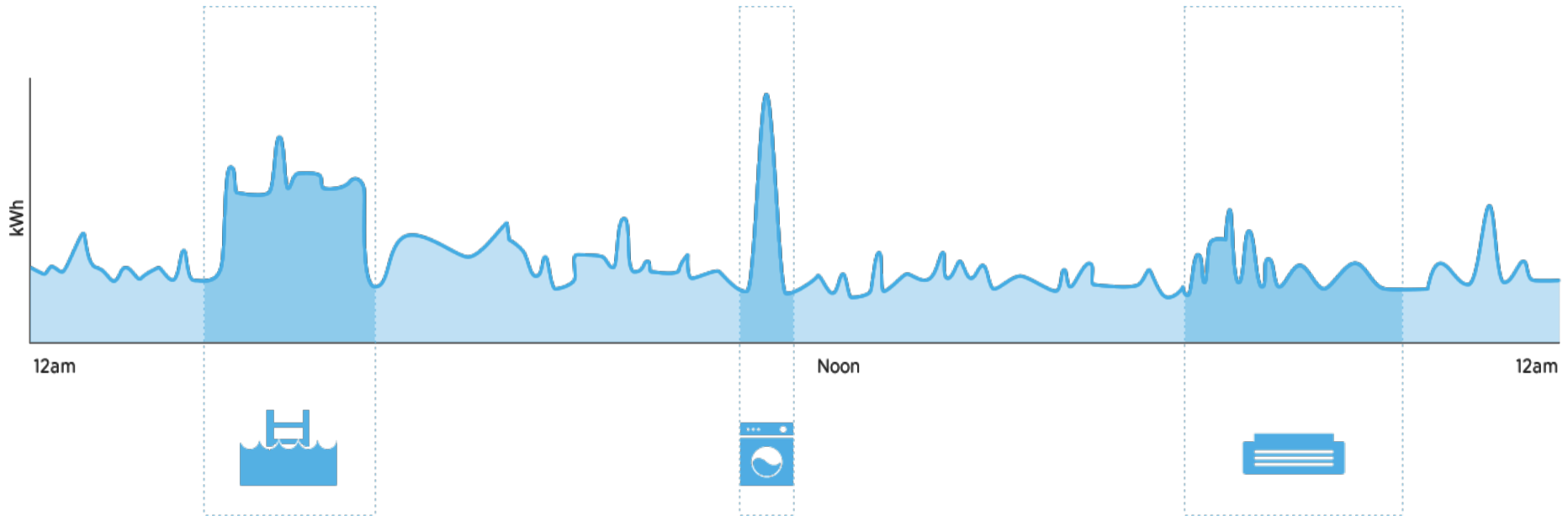
# ENERGY DISAGGREGATION



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# ENERGY DISAGGREGATION



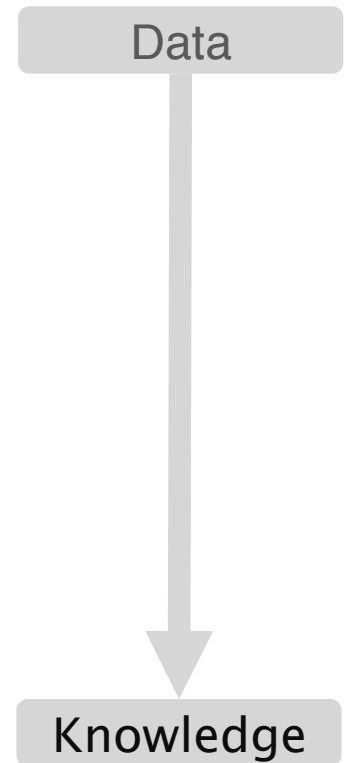
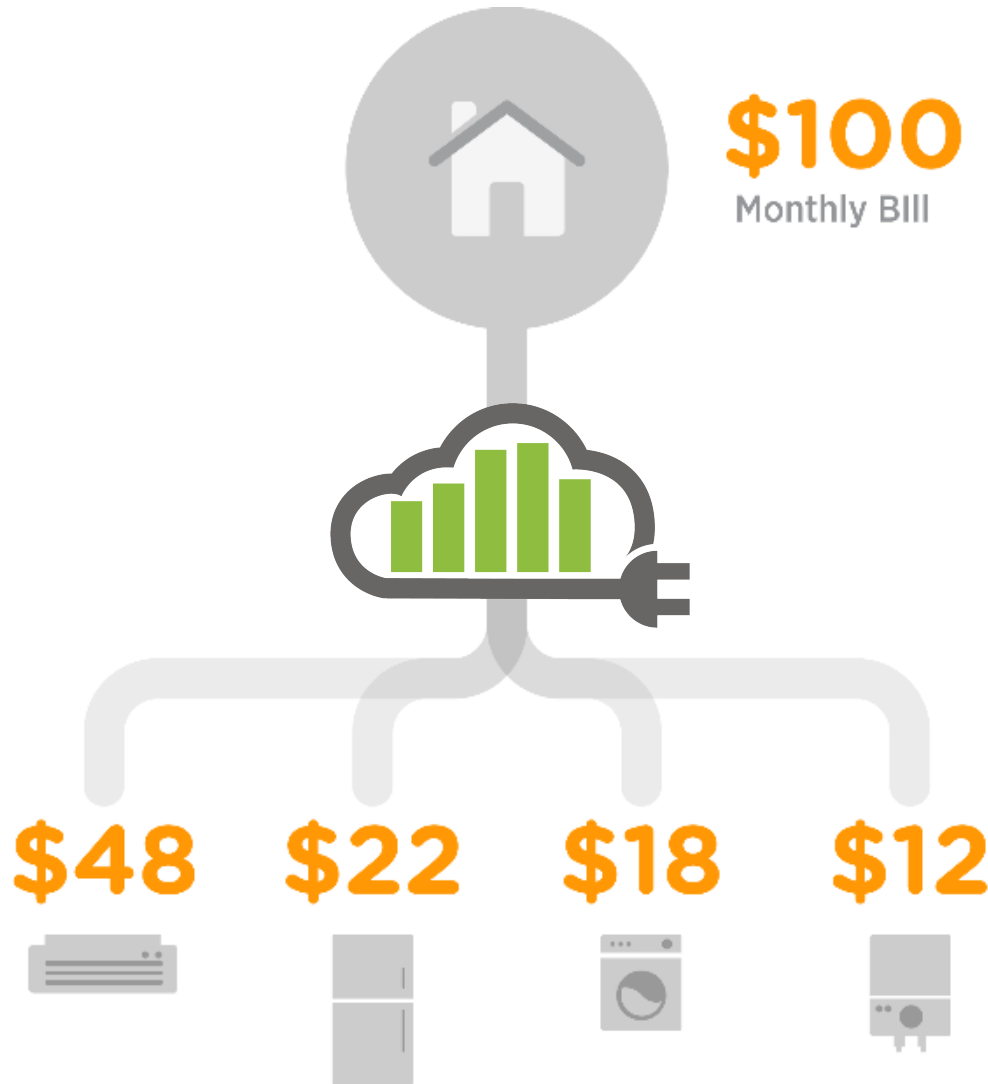
- Baseload
- Heating
- Cooling
- Refrigerator

- Dryer
- Water Heater
- Solar
- EV

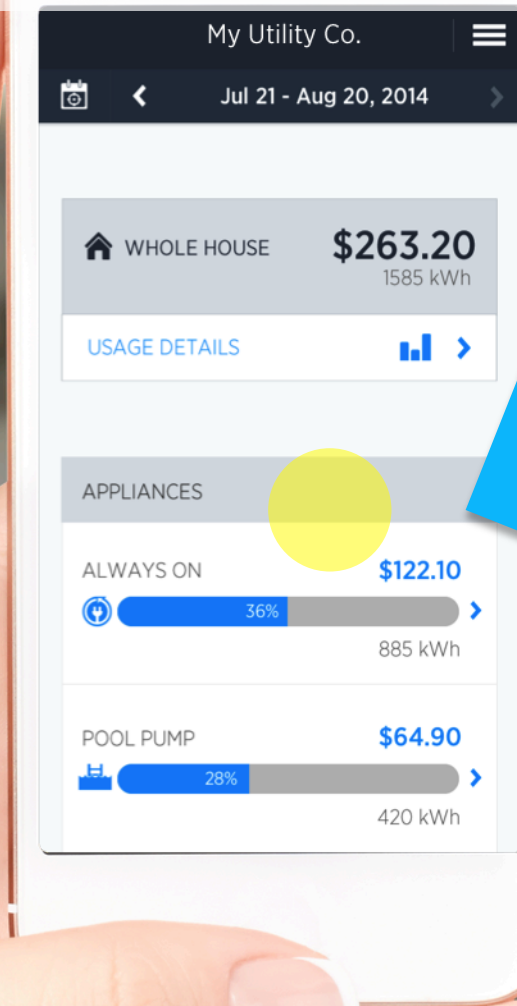
- Pool Pump
- Others



# KNOWLEDGE: Make Data Meaningful

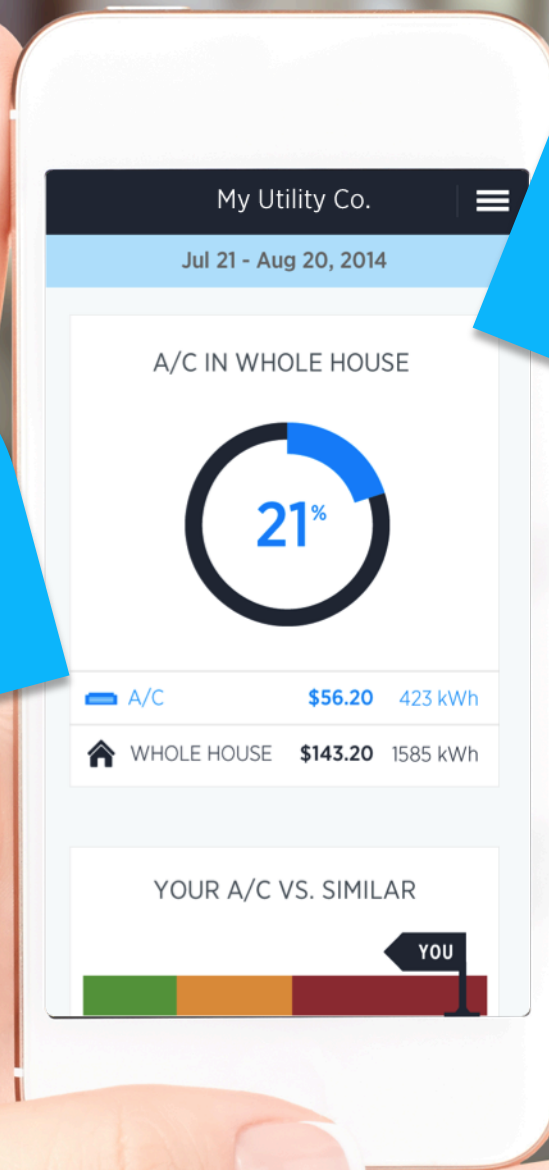


# ENGAGEMENT: Make EE Easy, Make it Actionable



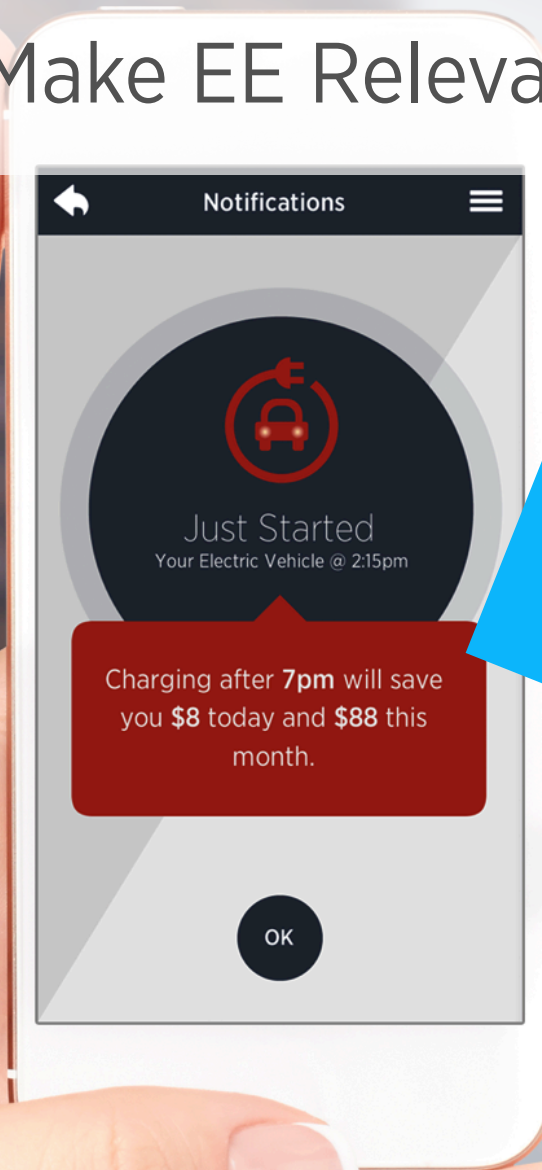
No plug-in  
monitors.  
Manage energy  
usage by appliance.

No guessing.  
Know exactly  
how to save  
money and be  
more efficient.



Neighborhood  
comparison by  
appliance.  
Know where  
you stand.

# ENGAGEMENT: Make EE Relevant NOW



Real-time,  
relevant mobile  
alerts.



# ENGAGEMENT: Proven EE Savings

## 5 Month Study with PG&E

- 850 Participants
- Zigbee In Home Display
- Bidgely HomeBeat Web & Mobile Platform

## Study Results

**7.7% Energy Savings** | Average savings realized across both device types amongst Time of Use customers during non peak periods

## Bidgely Analysis

**75% Retention** | 20% Higher Than All Other Apps

**65% Emails Opened** | 3x Higher Than Avg Email Communication

# ENGAGEMENT: Effective, Non-Intrusive DR

## Mobile, Real-Time Alerts

- Behavior-Based Demand Shift

## Relevant to Customer

- Target Key Appliances

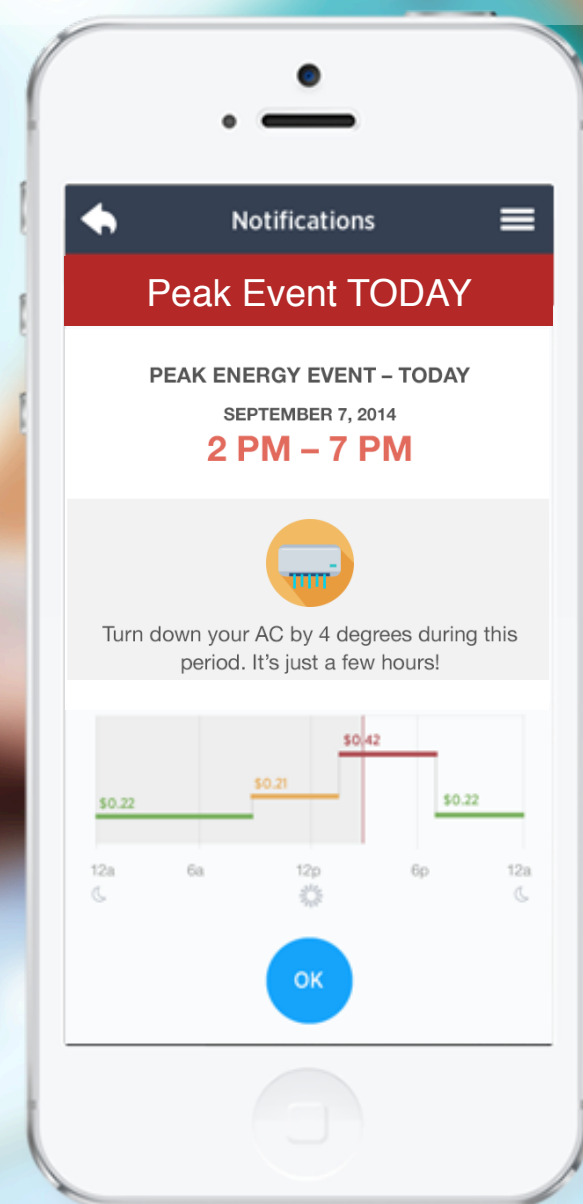
## Traditional DR Results

	kW Reduced	\$/kW Reduced
Direct Load Control	23%	\$23

## Bidgely ActionDR Results\*

	kW Reduced	\$/kW Reduced
<b>Bidgely ActionDR</b>	<b>21%</b>	<b>\$5</b>

\*Results obtained separate from any PG&E involvement



# ENGAGEMENT: Effective, Non-Intrusive DR

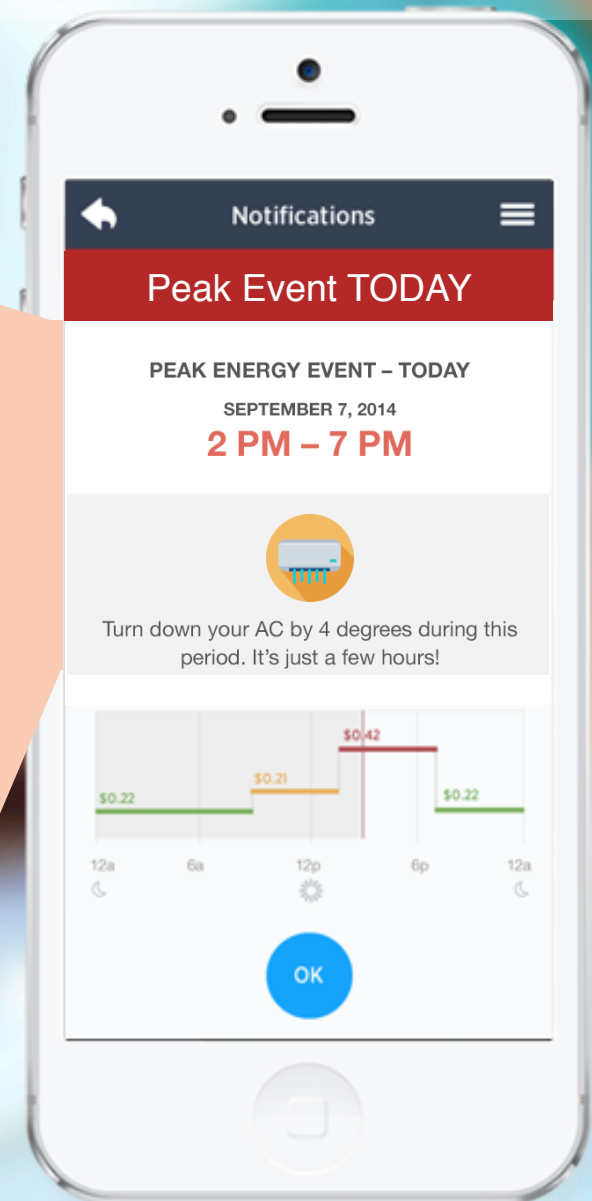
## PEAK ENERGY EVENT – TODAY

SEPTEMBER 7, 2014

**2 PM – 7 PM**



Turn down your AC by 4 degrees during this period. It's just a few hours!



# ENGAGEMENT: Effective, Non-Intrusive DR

## PEAK ENERGY EVENT – TODAY

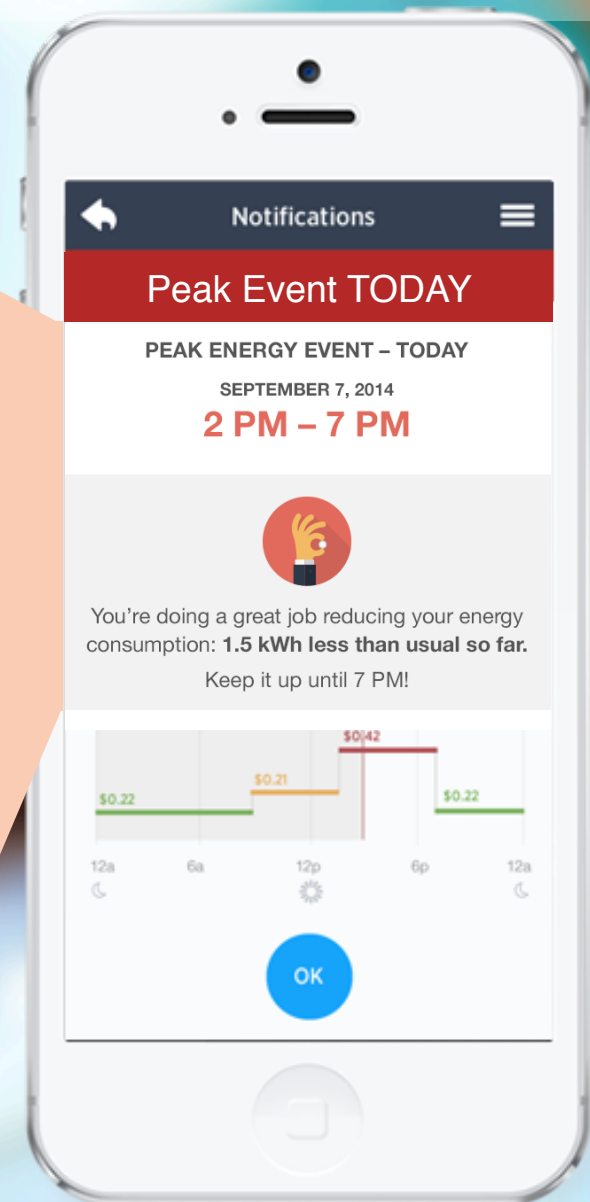
SEPTEMBER 7, 2014

**2 PM – 7 PM**



You're doing a great job reducing your energy consumption: **1.5 kWh less than usual so far.**

Keep it up until 7 PM!

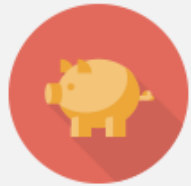




# ENGAGEMENT: Effective, Non-Intrusive DR

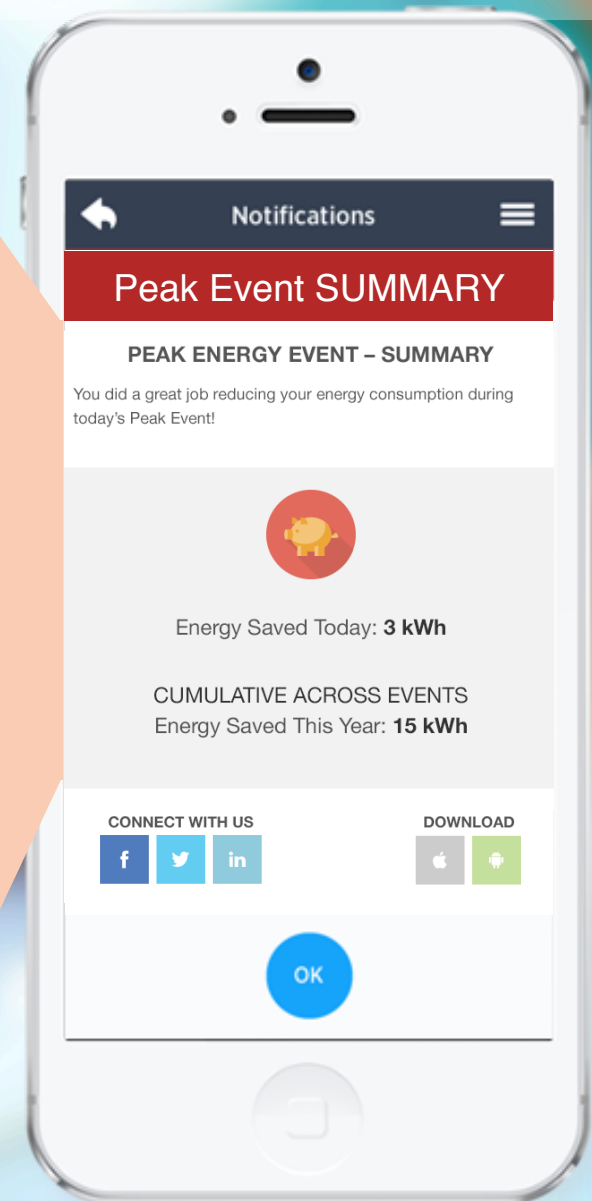
## PEAK ENERGY EVENT – SUMMARY

You did a great job reducing your energy consumption during today's Peak Event!



Energy Saved Today: **3 kWh**

CUMULATIVE ACROSS EVENTS  
Energy Saved This Year: **15 kWh**



# SUMMARY

Data is Critical to What We Do

AMI or HAN → HAN More Interesting

- More Appliances
- Real-Time Alerts & Notifications

HomeBeat Platform Built to Utilize Existing Infrastructure

- Low Hardware Implementation Costs

Best Energy Efficiency Results

Comparable DR Results at 75% Reduced Cost

